UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,524	01/02/2004	Charles Cameron Brackett	CRNI.110413	8682

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EXAMINER
TIMBLIN, ROBERT M

ART UNIT	PAPER NUMBER
2167	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/749,524	BRACKETT ET AL.
	Examiner	Art Unit	
	ROBERT TIMBLIN	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *8/6/2010*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *30-47* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *30-47* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action corresponds to application 10/749,524 which was filed 1/2/2004.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 8/6/2010 has been entered.

Response to Amendment

In the reply filed 8/6/2010, claims 1-29 have been cancelled and subsequently claims 30-47 have been added. Claims 30-47 currently stand pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 30-32, 36-38, and 42-44 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rothschild et al. ('Rothschild' hereafter, U.S. Patent Application

2002/0016718) in view of Eldar et al. ("Eldar" hereafter, U.S. Patent 7,290,011).

With respect to claim 30, Rothschild teaches A computerized method for managing

studies transferred from at least one acquisition device to a study process server in order to

transfer the studies to at least one review station, the computerized method comprising:

without having previously distributed the studies to a review station (0144):

automatically sorting (0253 and Fig. 12; *The relational database may, for example,*

organize the images based on patient, study, sequence and image. " Therein, organizing images

is interpreted as sorting*)* the studies (0207, 0253, 0255; e.g. patient medical records and images)

into a plurality of working sets (see 0253 wherein the images are organized based on patient,

study, sequence, and image) at the study process server (0027; e.g. an iPACS Web server and

Figs. 4 and 11-21; e.g. a medical image management system), each working set comprising a

collection of studies (0246; e.g. a number of images) to be reviewed by at least one clinician

(0167; e.g. the image delivery will take place in the background and be ready for physician or

doctor review) as a set (0143; e.g. a set of images associated with a patient), and

automatically transferring (0098; *"A poll request from a viewer allows the data center to*

deliver the data to the remote viewer so that it is available at the remote viewer when a physician

or other user needs it".) a subset (0242 and 0261; e.g. images marked for delivery) of studies

(0242; e.g. files (images) marked for delivery) from a first working set (0143; e.g. a set of

images associated with a patient) from the study process server (0027; e.g. an iPACS Web server

and Figs. 4 and 11-21; e.g. a medical image management system) to a review station (viewing

station 425, Fig. 11) such that the subset of studies from the first working set is available for review (0167; e.g. image delivery will take place in the background and be on the physician's desktop ready for review) at the review station (viewing station 425, Fig. 11) upon detecting a login (see 0085 teaching that a workstation polls for queued data upon occurrence of a predetermined triggering event such as a log in. See further paragraph 0264 wherein when an event such as logging in has occurred, a poller polls the data center for ready messages. Paragraph 0098 teaches that queued files are files ready for delivery. Accordingly, Rothschild teaches that marked images (e.g. a subset of patient images) that are ready for review are transferred upon detecting a log in);

after transferring the subset of studies from the first working set to the review station (0264; e.g. the images have been received), monitoring the review station for clinician review of the subset of studies from the first working set (0264; e.g. *"If it is the first viewing of the study 567 then a status message is sent to the data center that the study has been viewed 568"*. See also paragraph 0240 wherein programmed logic is provided to track the viewing of files);

detecting a clinician reviewing the subset of studies from the first working set at the review station (Fig. 17, drawing reference 537 and 0240 wherein viewing of files are tracked); and

populating the review station with additional studies from the first working set (0265; e.g. periodically polling for ready messages and images. Therein it is interpreted that more images are retrieved).

Rothschild is interpreted to teach populating the review station with additional studies but does not appear to teach populating the review station with additional studies upon detecting the clinician reviewing the subset of studies from the first working set at the review station.

Eldar, however, teaches populating the review station with additional studies (col. 13 lines 22-23; e.g. requesting additional ROIs (regions of interest) from the publication server) upon detecting the clinician reviewing the subset of studies from the first working set at the review station (col. 13 lines 6-23; *"If there are additional requests for ROIs (i.e. the user continues to interact with the image) (step 138), then the method continues with step 136 and requests the additional ROIs from the publication server."*) for sending additional regions of interest as a user interacts with a transmitted image.

Accordingly in the same field of endeavor, (i.e. transmitting patient studies), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the teachings of Eldar would have given a physician of Rothschild the ability to conveniently retrieve additional images of a patient when an image is being reviewed. Rothschild discloses such a need for additional regions of interest in paragraph 0143 (e.g. "…a set of images associated with a targeted region of a patient's body) and further the need for convenience of obtaining images (0162). Moreover, the teachings of Eldar would have provided Rothschild with the benefit of overcoming the limitation of transferring studies over a slow connection (as provided by Eldar, col. 2 lines 39-41 and needed by Rothschild, paragraph 0171 wherein a concern for bandwidth is disclosed).

With respect to claim 31, Rothschild teaches the method of claim 30, further comprising distributing the subset of studies from the first working set to each of a plurality of review stations (0163).

With respect to claim 32, Rothschild teaches the method of claim 30, further comprising implementing a predictive algorithm to identify a set of review stations and distributing the subset of studies from the first working set to the identified review stations (0087; e.g. a push system for automatically sending image data).

With respect to claim 36, Rothschild teaches One or more computer storage media storing computer-useable instruction that, when used by a computing device, cause the computing device to perform a computerized method for managing studies transferred from at least one acquisition device to a study process server in order to transfer the studies to at least one review station, the computerized method comprising:

without having previously distributed the studies to a review station (0144):

automatically sorting (0253 and Fig. 12; *"The relational database may, for example, organize the images based on patient, study, sequence and image."* Therein, organizing images is interpreted as sorting) the studies (0207, 0253, 0255; e.g. patient medical records and images) into a plurality of working sets (see 0253 wherein the images are organized based on patient, study, sequence and image) at the study process server (0027; e.g. an iPACS Web server and Figs. 4 and 11-21; e.g. a medical image management system), each working set comprising a collection of studies (0246; e.g. a number of images) to be reviewed by at least one clinician

(0167; e.g. the image delivery will take place in the background and be ready for physician or

doctor review) as a set (0143; e.g. a set of images associated with a patient), and

automatically transferring (0098; *"A poll request from a viewer allows the data center to*

deliver the data to the remote viewer so that it is available at the remote viewer when a physician

or other user needs it".) a subset (0242 and 0261; e.g. images marked for delivery) of studies

(0242; e.g. files (images) marked for delivery) from a first working set (0143; e.g. a set of

images associated with a patient) from the study process server (0027; e.g. an iPACS Web server

and Figs. 4 and 11-21; e.g. a medical image management system) to a review station (viewing

station 425, Fig. 11) such that the subset of studies from the first working set is available for

review (0167; e.g. image delivery will take place in the background and be on the physician's

desktop ready for review) at the review station (viewing station 425, Fig. 11) upon detecting a

login (see 0085 teaching that a workstation polls for queued data upon occurrence of a

predetermined triggering event such as a log in. See further paragraph 0264 wherein when an

event such as logging in has occurred, a poller polls the data center for ready messages.

Paragraph 0098 teaches that queued files are files ready for delivery. Accordingly, Rothschild

teaches that marked images (e.g. a subset of patient images) that are ready for review are

transferred upon detecting a log in);

after transferring the subset of studies from the first working set to the review station

(0264; e.g. the images have been received), monitoring the review station for clinician review of

the subset of studies from the first working set (0264; e.g. *"If it is the first viewing of the study*

567 then a status message is sent to the data center that the study has been viewed 568". See

also paragraph 0240 wherein programmed logic is provided to track the viewing of files);

detecting a clinician reviewing the subset of studies from the first working set at the

review station (Fig. 17, drawing reference 537 and 0240 wherein viewing of files are tracked);

and

populating the review station with additional studies from the first working set (0265; e.g.

periodically polling for ready messages and images. Therein it is interpreted that more images

are retrieved).

Rothschild is interpreted to teach populating the review station with additional studies but

does not appear to teach populating the review station with additional studies upon detecting the

clinician reviewing the subset of studies from the first working set at the review station.

Eldar, however, teaches populating the review station with additional studies (col. 13

lines 22-23; e.g. requesting additional ROIs (regions of interest) from the publication server)

upon detecting the clinician reviewing the subset of studies from the first working set at the

review station (col. 13 lines 6-23; "*i.e. the user continues to interact with the image) (step 138),*

then the method continues with step 136 and requests the additional ROIs from the publication

server.") for sending additional regions of interest as a user interacts with a transmitted image.

Accordingly in the same field of endeavor, (i.e. transmitting patient studies), it would

have been obvious to one of ordinary skill in the data processing art at the time of the present

invention to combine the teachings of the cited references because the teachings of Eldar would

have given a physician of Rothschild the ability to conveniently retrieve additional images of a

patient when an image is being reviewed. Rothschild discloses such a need for additional

regions of interest in paragraph 0143 (e.g. "…a set of images associated with a targeted region of

a patient's body) and further the need for convenience of obtaining images (0162). Moreover,

the teachings of Eldar would have provided Rothschild with the benefit of overcoming the limitation of transferring studies over a slow connection (as provided by Eldar, col. 2 lines 39-41 and needed by Rothschild, paragraph 0171 wherein a concern for bandwidth is disclosed).

With respect to claim 37, Rothschild teaches the one or more computer storage media of claim 36, further comprising distributing the subset of studies from the first working set to each of a plurality of review stations (0163).

With respect to claim 38, Rothschild teaches the one or more computer storage media of claim 36, further comprising implementing a predictive algorithm to identify a set of review stations and distributing the subset of studies from the first working set to the identified review stations (0087; e.g. a push system for automatically sending image data).

With respect to claim 42, Rothschild teaches A system for managing studies transferred from at least one acquisition device to a study process server in order to transfer the studies to at least one review station, the system including at least one processor and one or more computer storage media having a plurality of modules embodied thereon, the modules comprising:

a study sorting module (0240 and drawing reference 450) that automatically sorts (0253 and Fig. 12; *"The relational database may, for example, organize the images based on patient, study, sequence and image."* Therein, organizing images is interpreted as sorting) studies received by the study process server from the at least one acquisition device (0255 and drawing reference 411) into a plurality of working sets (see 0253 wherein the images are organized based

on patient, study, sequence and image), each working set comprising a collection of studies (0246; e.g. a number of images) to be reviewed by at least one clinician (0167; e.g. the image delivery will take place in the background and be ready for physician or doctor review) as a set (0143; e.g. a set of images associated with a patient);

a study distribution (drawing reference 446 and 0054; e.g. pushing means) module that automatically distributes a subset of studies from a first working set to a review station such that the subset of studies from the first working set is available on demand for review by a clinician at the review station (0167); and

a study control module (0104; e.g. a tracking system) that monitors the review station for clinician review of the subset of studies from the first working set (0264; e.g. *"If it is the first viewing of the study 567 then a status message is sent to the data center that the study has been viewed 568"*. See also paragraph 0240 wherein programmed logic is provided to track the viewing of files).

Rothschild does not appear to teach causing additional studies from the first working set to be transferred to the review station upon detecting a clinician reviewing the subset of studies from the first working set at the review station.

Eldar, however, teaches causing additional studies from the first working set to be transferred to the review station (col. 13 lines 22-23; e.g. requesting additional ROIs (regions of interest) upon detecting a clinician reviewing the subset of studies from the first working set at the review station (col. 13 lines 6-23; *"i.e. the user continues to interact with the image) (step 138), then the method continues with step 136 and requests the additional ROIs from the*

publication server.") for sending additional regions of interest as a user interacts with a transmitted image.

Accordingly in the same field of endeavor, (i.e. transmitting patient studies), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the teachings of Eldar would have given a physician of Rothschild the ability to conveniently retrieve additional images of a patient when an image is being reviewed. Rothschild discloses such a need for additional regions of interest in paragraph 0143 (e.g. "…a set of images associated with a targeted region of a patient's body) and further the need for convenience of obtaining images (0162). Moreover, the teachings of Eldar would have provided Rothschild with the benefit of overcoming the limitation of transferring studies over a slow connection (as provided by Eldar, col. 2 lines 39-41 and needed by Rothschild, paragraph 0171 wherein a concern for bandwidth is disclosed).

With respect to claim 43, Rothschild teaches the system of claim 42, wherein the study distribution module distributes the subset of studies from the first working set to each of a plurality of review stations (0163).

With respect to claim 44, Rothschild teaches the system of claim 42, wherein the study distribution module implements a predictive algorithm to identify a set of review stations and distributes the subset of studies from the first working set to the identified review stations (0087; e.g. a push system for automatically sending image data).

Claims 33, 34, 39, 40, 45, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Rothschild and Eldar and further in view of Cooke, Jr. et. al. ("Cooke" hereafter, U.S. Patent 6,574,629).

With respect to claim 33, Rothschild and Eldar do not appear to teach the method of claim 30, further comprising continuously monitoring the review station to determine if review of a study from the first working set has been completed and removing the study from the first working set after review of the study has been completed.

Cook, however, teaches continuously monitoring the review station to determine if review of a study from the first working set has been completed and removing the study from the first working set after review of the study has been completed (col. 21 lines 46-55) for deleting a study.

Accordingly, in the same field of endeavor, (i.e. patient studies), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Cooke would have given Rothschild and Eldar the ability to efficiently manage cache consumption in order to protect a cache from "overflowing" (as provided by Cooke col. 9 lines 35-42).

With respect to claim 34, Rothschild and Eldar do not appear to teach the method of claim 33, further comprising deleting the study from at least one other review station in response to determining that review of the study has been completed.

Cooke, however, teaches deleting the study from at least one other review station in response to determining that review of the study has been completed (col. 21 lines 46-55). Accordingly, as claim 34 depends upon claim 33, the same motivation used therein applies to this claim.

With respect to claim 39, Rothschild and Eldar do not appear to teach the one or more computer storage media of claim 36, further comprising continuously monitoring the review station to determine if review of a study from the first working set has been completed and removing the study from the first working set after review of the study has been completed.

Cooke, however, teaches continuously monitoring the review station to determine if review of a study from the first working set has been completed and removing the study from the first working set after review of the study has been completed (col. 21 lines 46-55) for deleting a study.

Accordingly, in the same field of endeavor, (i.e. patient studies), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Cooke would have given Rothschild and Eldar the ability to efficiently manage cache consumption in order to protect a cache from "overflowing" (as provided by Cooke col. 9 lines 35-42).

With respect to claim 40, Rothschild and Eldar do not appear to teach the one or more computer storage media of claim 39, further comprising deleting the study from at least one other review station in response to determining that review of the study has been completed.

Cooke, however, teaches deleting the study from at least one other review station in response to determining that review of the study has been completed (col. 21 lines 46-55. Accordingly, as claim 40 depends upon claim 39, the same motivation used therein applies to this claim.

With respect to claim 45, Rothschild and Eldar do not appear to teach the system of claim 42, wherein the study control module continuously monitors the review station to determine if review of a study from the first working set has been completed and removes the study from the first working set after review of the study has been completed.

Cooke, however, teaches continuously monitoring the review station to determine if review of a study from the first working set has been completed and removing the study from the first working set after review of the study has been completed (col. 21 lines 46-55) for deleting a study.

Accordingly, in the same field of endeavor, (i.e. patient studies), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Cooke would have given Rothschild and Eldar the ability to efficiently manage cache consumption in order to protect a cache from "overflowing" (as provided by Cooke col. 9 lines 35-42).

With respect to claim 46, Rothschild and Eldar do not appear to teach the system of claim 45, wherein the study is deleted from at least one other review station in response to determining that review of the study has been completed.

Cooke, however, teaches deleting the study from at least one other review station in response to determining that review of the study has been completed (col. 21 lines 46-55. Accordingly, as claim 46 depends upon claim 45, the same motivation used therein applies to this claim.

Claims 35, 41, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Rothschild and Eldar and further in view of Fuller (U.S. Patent Application 2005/0050552)

With respect to claim 35, Rothschild and Eldar do not appear to teach the method of claim 30, further comprising monitoring the review station for a low buffer threshold and re-populating the review station with an additional subset of studies upon reaching the low buffer threshold.

Fuller, however, teaches monitoring the review station for a low buffer threshold and re-populating the review station with an additional subset of studies upon reaching the low buffer threshold (0019 and figure 3) to ensure requested data are available for immediate delivery.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Fuller's system would have provided Rothschild and Eldar with enhancing the likelihood that the requested data are available for immediate delivery (Fuller, 0004). Thus, Fuller would have provided a method to further reduce image analysis to aid a busy physician (needed by Rothschild, 0162).

With respect to claim 41, Rothschild and Eldar do not appear to teach the one or more computer storage media of claim 36, further comprising monitoring the review station for a low buffer threshold and re-populating the review station with an additional subset of studies upon reaching the low buffer threshold.

Fuller, however, teaches monitoring the review station for a low buffer threshold and re-populating the review station with an additional subset of studies upon reaching the low buffer threshold (0019 and figure 3) to ensure requested data are available for immediate delivery.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Fuller's system would have provided Rothschild and Eldar with enhancing the likelihood that the requested data are available for immediate delivery (Fuller, 0004). Thus, Fuller would have provided a method to further reduce image analysis to aid a busy physician (needed by Rothschild, 0162).

With respect to claim 47, Rothschild and Eldar do not appear to teach the system of claim 42, wherein the study control module monitors the review station for a low buffer threshold and re-populates the review station with an additional subset of studies upon reaching the low buffer threshold.

Fuller, however, teaches monitoring the review station for a low buffer threshold and re-populating the review station with an additional subset of studies upon reaching the low buffer threshold (0019 and figure 3) to ensure requested data are available for immediate delivery.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Fuller's system

would have provided Rothschild and Eldar with enhancing the likelihood that the requested data are available for immediate delivery (Fuller, 0004). Thus, Fuller would have provide a method to further reduce image analysis to aid a busy physician (needed by Rothschild, 0162).

Response to Arguments

Applicant's arguments with respect to the new claims have been considered but are moot in view of the new ground(s) of rejection.

As a further note, Examiner acknowledges Applicant's assertion that "Minyard and Rothschild teach an all or nothing approach" by either (1) pushing all images or (2) sending the images to a review station upon the occurrence of some event such as a login (remarks, page 10).

As provided in the rejection above, Examiner submits that at least Rothschild teaches that the images are organized based on patient, study, sequence, and image to teach the claimed sorting studies into working sets. Rothschild also teaches sending images that are ready to be delivered (e.g. see paragraph 0264) as marked by prefetch logic (drawing reference 445 and see also paragraphs 0243 and 0261).

Accordingly, it is respectfully disagreed that Rothschild teaches sending all or nothing; rather, they only send data that is marked as ready to be delivered. Therein, this "marked data" (such as a marked patient image file) is seen as a subset of the working set (patient images).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and is listed on the PTO 892 form attached herein.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT TIMBLIN whose telephone number is (571)272-5627. The examiner can normally be reached on M-Th 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT TIMBLIN/
Examiner, Art Unit 2167